

REMARKS

The June 28, 2004 Office Action regarding the above-identified application has been carefully considered, and the amendments above together with the remarks that follow are presented in a bona fide effort to respond thereto and address all issues raised in that Action. Care has been taken in drafting the amendments to avoid introduction of new matter. Prompt favorable reconsideration of this amended application is respectfully requested.

The opening paragraph of the specification has been amended to update the citations of related applications. This application was filed as a continuation of application 10/118,991. The opening paragraph now specifies that continuity and the status of the immediate parent (as USP 6,700,526). The amended opening paragraph also states the chain of priority claims, essentially as recited in the 10/118,991 parent application.

An information disclosure statement was filed on June 17, 2004, but apparently was not matched with the file prior to the June 28, 2004 Office Action, as the Action does not indicate consideration of that statement or of any of the documents listed on the associated form PTO-1449. Also, one point in the statement may have need clarification. Contrary to the statement, US publication 2003/0043067 is not itself an earlier case from which this case claims priority. Instead, the 2003/0043067 publication relates to a parallel case claiming priority from common ancestor application 09/658,188. It is respectfully requested that the reconsideration of this application include full consideration of the documents identified in the June 17, 2004 information disclosure statement and that the next official communication from the Examiner include an initialed copy of the form PTO-1449 indicating consideration of all of the listed documents.

Claims 11-13 were rejected on the ground that the phrase "capable of identifying" in the last paragraph of independent claim 11 was indefinite. Claim 11 has been amended to delete "capable

of,” and the paragraph now includes the definite functional recitation “**for** identifying.” In view of the amendment, it is requested that the Examiner withdraw the indefiniteness rejection with regard to claim 11.

Claims 12 and 13 were not rejected, except for the alleged indefiniteness. Claims 12 and 13 have been recast in independent form, by incorporating the original wording of claim 11, with the change of the phrase “capable of” to “**for** identifying.” These claims also should now be definite; and since there was no art rejection, independent claims 12 and 13 should now be allowable.

Claim 11 was rejected as anticipated by each of six patents. The applied patents are 6,222,481 to Abrahamson et al.; 6,252,538 to Chignell; 6,396,433 to Clodfelter; 5,644,314 to Ahmad et al.; 5,592,170 to Price et al.; and 5,130,711 to Kimura et al.

Claim 11 has been amended to specify the image processor, the feature processor and the discriminator. In the example disclosed in the original specification and drawings, the image processor 108 builds the data structure (see paragraphs 059 and 060 of the specification). Fig. 1 shows feature processor 110 responsive to the output of the image processor 108 and discriminator 114 responsive to the output of the feature processor 110.

It is respectfully submitted that the applied patents do not disclose an image processor for building a data structure corresponding to an image of a subsurface region containing the buried object from data collected from the GPR sensor, in combination with a feature processor and a discriminator that in effect work from the image data structure produced by the image processor. The rejection pointed to the abstracts of the six cited patents. The prior patents, particularly the abstracts, apparently do not teach use an image data structure in this way but instead teach detecting objects directly from the GPR data.

Since the applied documents do not meet all of the limitations of amended claim 11, the anticipation rejection thereof should be withdrawn. New claims 30-36 specify additional features relating to display of a representation of the identified buried object. These new claims find support in paragraph #071 (on page 27) of the original specification. New claims 30-36 depend from 11 and should be allowable at least for the same reason.

Although somewhat different in scope, independent claims 37 (system) and 40 (method), both relate to building a three-dimensional data structure, feature processing based on that three-dimensional data structure and attendant display. In the disclosed example (e.g. in paragraph 059 on page 22 of the original specification), the image processor 108 builds a data structure from the GPR data processed by data processor 104. The image processor 108 can for example reconstruct the information in three-dimensions. Fig. 1 shows feature processor 110 responsive to the output of the image processor 108.

It is believed that the four cited patents do not teach a display technique that utilizes a three-dimensional data structure, feature extraction from that structure and display of an image based on the extracted feature, as claimed. Claims 37 and 40, and claims 38-39 that depend from 37 therefore should be patentable.

Upon entry of the above claim amendments, claims 11-13 and 34-40 should be active in this application, all of which should be in condition for allowance. Accordingly, this case should now be ready to pass to issue; and Applicant respectfully requests a prompt favorable reconsideration of this matter.

It is believed that this response addresses all issues raised in the June 28, 2004 Office Action. However, if any further issue should arise that may be addressed in an interview or an

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Examiner's amendment, it is requested that the Examiner telephone Applicant's representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Keith E. George", written over a horizontal line.

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